

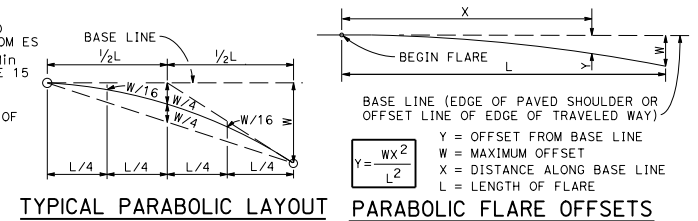
Dist	COUNTY	ROUTE	POST MILES	SHEET TOTAL
			TOTAL PROJECT	NO. SHEETS

Randell D. Hiatt
REGISTERED CIVIL ENGINEER

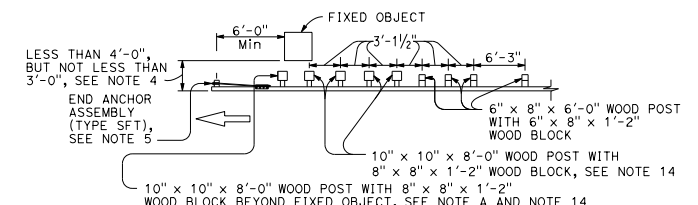
May 31, 2018
PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
Randell D. Hiatt
No. C50200
Exp. 6-30-19
CIVIL
STATE OF CALIFORNIA



TYPICAL PARABOLIC LAYOUT **PARABOLIC FLARE OFFSETS**



NOTE A: For a series of fixed objects (bridge columns, overhead sign supports, etc.) additional 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood blocks at 3'-1/2" center to center spacing are to be used between fixed objects.

STRENGTHENED MIDWEST GUARDRAIL SYSTEM SECTIONS FOR FIXED OBJECT

Use strengthened MGS sections with Types 16A, 16B or 16C layouts where minimum clearance between the face of the railing and fixed object(s) is less than 4'-0", but not less than 3'-0". See Note 4

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

**MIDWEST GUARDRAIL SYSTEM
TYPICAL LAYOUTS FOR
ROADSIDE FIXED OBJECTS**

NO SCALE

A77R3

- NOTES:**
1. Line post, blocks and hardware to be used are shown on Standard Plans A77L1, A77L2, A77N1, A77N2 and A77M1.
 2. MGS post spacing to be 6'-3" center to center, except as otherwise noted.
 3. Except as noted, line posts are 6" x 8" x 6'-0" wood with 6" x 8" x 1'-2" notched wood blocks or notched recycled plastic blocks may be used for 6" x 8" x 6'-0" wood line posts with 6" x 8" x 1'-2" wood blocks where applicable and when specified.
 4. A 4'-0" minimum clearance is required between the face of the railing and the face of a fixed object located directly behind MGS sections with post spacing of 6'-3". Construct MGS as shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object" on this plan, where the clearance between the face of the railing and the face of a fixed object is less than 4'-0", but not less than 3'-0". Where the clearance is less than 3'-0", a concrete wall or barrier should be constructed to shield the fixed object(s).
 5. For End Anchor Assembly (Type SFT) details, see Standard Plan A77S1.
 6. 31" in-line terminal system and treatments are used where site conditions will not accommodate a 31" flared end treatment.
 7. The type of 31" terminal system to be used will be shown on the Project Plans.
 8. The 15:1 or flatter flare used with Type 16C Layout is based on the edge of the paved shoulder or offset line of edge of the traveled way. The length of MGS within the 15:1 or flatter flare is based on site conditions and should be a length equal to multiples of 12'-6".
 9. For details of the Buried Post End Anchor used with Type 16C Layout, see Standard Plan A77T2.
 10. As site conditions dictate, construct additional MGS to shield fixed object(s). Additional MGS length equal to multiples of 12'-6". Post spacing at 6'-3" except as specified in Note 4.
 11. Layout Types 16A, 16B or 16C are typically used where MGS is recommended to shield roadside fixed object(s) and a crashworthy 31" end treatment is required for only one direction of traffic.
 12. Where placement of dike is required with MGS, see Standard Plan A77N4 for dike positioning details.
 13. For typical flare offsets for 25'-0" length parabola with maximum offset of 1'-0", see Standard Plan A77P1.
 14. W6 x 15 steel post, 8'-0" in length, with 8" x 8" x 1'-2" notched wood block or notched recycled plastic blocks may be used in place of the 10" x 10" x 8'-0" wood post with 8" x 8" x 1'-2" wood block shown in the detail "Strengthened Midwest Guardrail System Sections for Fixed Object".
 15. Use this offset for 8" block. For 12" block use minimum 4'-0" offset.